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Application Number	10/502,473
Filing Date	August 30, 2004
First Named Inventor	Mark Edward Dawes
Art Unit	1772
Examiner Name	Christopher P. Bruenjes
Attorney Docket No.	DTG1-120US

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Applicant(s): Mark Edward Dawes et al.

Docket No.

DTG1-120US

Serial No.

10/502,473

Filing Date

August 30, 2004

Examiner

Christopher P. Bruenjes

Group Art Unit

1772

Invention: HEAT-SEALABLE AND SHRINKABLE MULTI-LAYER POLYMERIC FILM

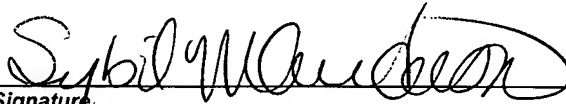
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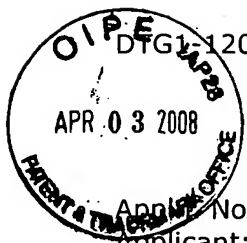
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DTG1-120US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant No: 10/502,473
Applicant: Mark Edward Dawes, et al.
Filed: August 30, 2004
Title: HEAT-SEALABLE AND SHRINKABLE MULTILAYER POLYMERIC FILM
TC/A.U.: 1772
Confirmation No.: 3902
Notice of Appeal Filed: September 25, 2007
Docket No.: DTG1-120US

SUBSTITUTE APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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S I R :

In response to the action dated February 28, 2008 indicating that the brief filed on January 22, 2008 is non-compliant, Appellants hereby submit an amended appeal brief in their appeal from the decision rejecting claims 1-10, 15-23, and 37-54, all currently pending claims in this application, and request reconsideration and reversal of the rejection.

I. REAL PARTY IN INTEREST

The real Party In Interest in this matter is DuPont Teijin Films U.S. Limited Partnership, Assignee of the total interest in this application.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-10, 15-24, 26-32 and 34-54 are currently pending in the application. Claims 24, 26-32 and 34-36 have been withdrawn, and claims 11-14, 25 and 33 have been cancelled.

Claims 1-10, 15-23, and 37-54 stand finally rejected under 35 U.S.C. § 103(a), and all of these rejections are appealed herewith. Claim 1 is the only independent claim. Claims 2-10, 15-23, and 37-54 each depend directly or indirectly from claim 1.

Appellants contend that all claims are patentable over the cited prior art, and provide arguments and support for that contention in the sections below.

IV. STATUS OF AMENDMENTS

All amendments have been entered, and no amendments have been filed after the Final Office Action of May 25, 2007.

This application is the National Phase filing of PCT application serial number PCT/GB03/00233 filed January 21, 2003 claiming priority of UK patent application number 0023927.7, filed January 25, 2002.

As originally filed the application had 36 numbered claims, a number of which were multiple dependent claims resulting to a total of 259 claims.

In a first action, dated 8/16/2006, the Examiner requested restriction and election of one of six groups of claims. Appellants elected with traverse to prosecute the claims of group I which includes claims 1-23.

In a first action on the merits, dated 12/04/2006, the Office rejected the traverse argument, and proceeded with the examination of elected group I claims 1-23, claims 24-36 becoming withdrawn. Claims 1-23 were rejected under 35 U.S.C. § 112 2d paragraph. Claims 1-23 were also rejected under 35 U.S.C. § 103(a) as being unpatentable under Hanaoka et al (EP 1 033 319 A1), Kendig (WO 01/054886 A1) and/or (1) Boyce et al (WO 99/62982 A1) or (2) Hart (USPN 5,130,189).

In response, Applicants by an amendment filed 03/23/07 amended claims 1-10, and 15-23, cancelled claims 11-14, 25, and 33 and presented new claims 37-54. By the same amendment Applicants removed all multiple dependencies from claims 2-10 and 15-23 and argued the patentability of the amended and new claims over the section 112 2d paragraph rejection and over the art applied.

In a following action dated 05/25/2007, the Examiner withdrew the previous grounds for rejection in view of the amendment, and rejected:

- (1) claims 1-6, 15-18 and 21-23 under 35 U.S.C. § 103(a) over Kendig (WO 01/054886) in view of Meilhon (USPN 6,105,776);
- (2) claims 7-9 and 37-54 under 35 U.S.C. § 103(a) over Meilhon in view of Boyce, et al (WO 99/62982 A1); and
- (3) claims 19-20 under 35 U.S.C. § 103(a) over Kendig in view of Meilhon and further in view of Hart (USPN 5,130,189)

This action was made FINAL.

On August 24, 2007 Appellants filed a request for reconsideration traversing the Examiner's application of the *Graham v. John Deere Co.* guidelines for determining patentability to the pending claims of the present application.

An advisory action stating that the Examiner's position remains unchanged, that claims 1-10, 15-23 and 37-54 remain rejected for the grounds stated in the action dated 05/25/2007, and that claims 24, 26-32 and 34-36 remain withdrawn, was issued on 09/04/2007.

Applicants filed a notice of appeal on September 25, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 claims an open-ended tube¹ comprising walls of a heat-sealable multi-layer polymeric film², wherein said film comprises an outer shrinkable substrate layer and an inner heat-sealable layer³, wherein said substrate layer has a degree of shrinkage in a longitudinal dimension of the tube of about 0% to about 50% when heated from ambient temperature to a temperature in the range of 55 to 100°C, and a degree of shrinkage in a transverse dimension of the tube of about 5 to about 70% when heated from ambient temperature to a temperature in the range of 55 to 100°C⁴. The multi-layer film comprises a plurality of separating means⁵ which enable one multi-layer portion of said film to be separated from an adjacent multi-layer portion of said film⁶.

Dependent claim 22 claims a tube according to claim 1 wherein each of said separating means comprises one⁷ or two⁸ sets of perforations⁹ extending along a dimension of the tube which is substantially parallel to its longitudinal dimension.

Dependent claim 23 claims a tube according to claim 1 wherein there are two separating means¹⁰.

In use, prior to subjecting the contents of the container to a cooking cycle, the tube is separated into multiple portions, preferably into a lid portion and a base portion, by tearing¹¹ along the perforations of the separating means.

¹ Page 29 at lines 5-7, and Figure 4 at 4

² Figure 1 at 4

³ Page 28 at line 6, and Figure 1 at 2

⁴ Page 3 line 32 to page 4 line 5

⁵ Page 4 at lines 27-28, and Figure 4 at 7

⁶ Page 4 at lines 28-29

⁷ Page 5 lines 1-4

⁸ Page 5 lines 4-6

⁹ Page 29 line 7, and Figure 4 at 7

¹⁰ Page 4 line 33, page 5 lines 28-29, page 6 line 23 and 26-27, and Figure 4 at 7

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue on appeal is whether claims 1-10, 15-23 and 37-54 are unpatentable under 35 U.S.C. § 103(a) over Kendig (WO 01/054886) in view of Meilhon (USPN 6,105,776) and further in view of Boyce et al (WO 99/62982) and Hart (USPN 5,130,189).

VII. ARGUMENT**Independent Claim 1**

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being obvious over Kendig, WO 01/054886 A1, in view of Meilhon, USPN 6,105,776.

It is the Examiner's position that under the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) (hereinafter "*Graham*"), Kendig teaches a packaging film comprising a heat sealable multi-layer polymeric film comprising an outer shrinkable substrate layer and an inner heat-sealable layer (p.2, l 1-5). The Examiner asserts that the substrate layer has a degree of shrinkage in longitudinal dimension of the tube of about 0% to 50% when heated from ambient temperature to a temperature in the range of 55 to 100° C and a degree of shrinkage in a transverse dimension of the tube of about 5 to about 70% when heated from ambient temperature in the range of 55 to 100° C, based on the fact that it is oriented in the range of approximately 5% to 55% (p.4 l 20-22).

The Examiner agrees that Kendig fails to teach that the packaging film is formed into an open ended tube or that it comprises a plurality of separating means which enable one multilayer portion of said film from being separated from an adjacent multilayer portion of said film. However, according to the rejection, Meilhon teaches wrapping the film completely around the object to be packaged so as to fully envelop the object and teaches forming multiple zones of weakness to permit easy separation of one multilayer portion of a film from adjacent multilayer portion to make it easier to access the object contained within the packaging film.

The Examiner, therefore, concludes that it would have been obvious to one having ordinary skill in the art at the time of the claimed invention to wrap packaging film around an object to fully envelop the object and to form multiple zones of weakness to permit easy separation of adjacent portions of the film to make easy access to the object "container"

¹¹ Page 6 lines 29-31

(sic; contained? See page 4 of Final Office Action, last sentence of last full paragraph) within the film, as taught by Meilhon.

Applicants believe the Examiner's application of *Graham* to the claims of this application to be in error. Applicants do not claim a process of wrapping tearable film around an object using a film designed to tear easily to provide access to the packaged film, but a film structure having certain distinct properties. The film structure is intended to wrap objects, but the claims are to the film, not its intended use. Thus what must be determined is whether the claimed tubular film structure is obvious to the person having ordinary skill in the art in view of the combined film structure disclosures in the applied art. It is film composition and structure that must be compared, not intended use.

In *Graham* the Court set out a framework for applying the statutory language of § 103. "The obviousness determination analysis is objective. Under 35 U.S.C. § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. It is against this background that the obviousness or non obviousness of the subject matter is determined." (*Graham* at 17-18.) The Supreme Court in *KSR Int'l Co. v. Teleflex Inc.* reasserted, the factual inquiries set forth in *Graham* that must be applied for determining obviousness under 35 U.S.C. 103(a) which are:

1. Determining the scope and content of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue;
3. Resolving the level of ordinary skill in the pertinent art; and
4. evaluating evidence of secondary consideration.

Under *KSR Int'l Co. v. Teleflex Inc.* the Supreme Court requires looking at what is the objective reach of the claim and "whether the improvement is more than the predictable use of prior art elements according to their established functions." (Slip op. at 13)

It is against this background that the obviousness or non obviousness of the subject matter is determined. Appellants believe that the Examiner's analysis does not fully comply with the *Graham/KSR* directives, and should be reversed for the following reasons.

1. Determining the scope and content of the prior art.

Applicants agree that Kendig teaches a heat-shrinkable heat sealable multilayer polymeric film that is biaxially oriented and exhibits film shrinkage at 100° C of

approximately 5% to 55%, and that such film is useful in packaging both non-cook and cook-in applications. However, as the Examiner states there is nothing in Kendig suggesting separating means to remove a section of the film wrap.

Applicants understand Meilhon to teach a shrinkable film that has an inherent preferred direction of tearing **D** substantially perpendicular to the direction of extrusion **E** which is the same as the winding direction of the film over the articles it is intended to wrap. (Column 3 lines 23-28 and figure 1) According to Meilhon, there is provided a series of rather specifically aligned perforations perpendicular to the preferred direction of tearing of the film forming a weakened zone of perforations **A**. The perforations provide a zone **A** that is easily punctured at any point (as by a person's thumb) to create a starting point for tearing the film along the preferred direction of tearing **D**, perpendicular to the line of perforations. The spacing of the perforations determines the width of the tear strip **K** as shown in figure 2. See column 4 lines 43-65 and more particularly lines 51-62 which describe the function of the weakened zone **A** and tear zone **K** as follows:

"The edge of the tongue corresponding to the central line 7 will be cut off. It is then sufficient to grasp this edge and to pull the tongue J in the direction of the arrow T1 or T2, that is to say along the preferred direction D of tearing, perpendicularly to the lines of perforations 7, 9, 10 to effect the opening by cutting, in the film 3, of a strip K, the width of which corresponds to that of the tongue J. The traction on the tongue J is thus exerted in a direction transverse, advantageously perpendicular, to the direction of the zone of weakening A forming a band, and not in the direction of this zone A put into concrete form by the lines of perforations 7, 9, 10."

2. Ascertaining the differences between the prior art and the claims at issue.

Independent claim 1 reads:

"An open-ended tube comprising walls of a heat-sealable multi-layer polymeric film, wherein said film comprises an outer shrinkable substrate layer and an inner heat-sealable layer, wherein said substrate layer has a degree of shrinkage in a longitudinal dimension of the tube of about 0% to about 50% when heated from ambient temperature to a temperature in the range of 55 to 100°C, and a degree of shrinkage in a transverse dimension of the tube of about 5 to about 70% when heated from ambient temperature to a temperature in the range of 55 to 100°C, wherein said multi-layer film comprises a plurality of separating means which enable one multi-layer portion of said film to be separated from an adjacent multi-layer portion of said film". (Emphasis added)

This is a “means for” clause that must be interpreted in accordance with the specification content, to determine whether such enabling means are similar or different from the means disclosed in Meilhon. The specification describes the plurality of separating means as a set of longitudinal perforations¹² running along the tube axis forming two spaced parallel tearable strips that when both are removed separate the tube into two sections¹³, a lid section that remains adhered to the container¹⁴, and a base section that may be retained for reference¹⁵ (such as for cooking instructions), or discarded.

As a result, the claimed plurality of separating means are substantially different from either the perforation zone **A** illustrated in Meilhon or the preferential inherent tearing direction **D** of the Meilhon film. The film claimed and the film shown in Kendig does not exhibit a preferred tearing direction that can be used to advantage, so that inclusion of the perforations of Meilhon to the film of Kendig would not result in “separating means” as claimed.

The “separating means” in Meilhon are inherent in the structure of the film. Strategically placed perforations, aligned orthogonally to the tearing zones designed to create tongs for use with the tearing zones, do not form tearing zones as claimed. It is clear that only localized tear but no lengthwise separation of the film occurs along zone **A** in Meilhon; that is, the film separation does not occur along **A** but perpendicularly to it. To the contrary, the claimed invention requires separation along the perforation zone, not orthogonally to it.

Therefore, the invention as claimed requires “a plurality of separating means” (two, substantially parallel, perforated spaced tearing zones within the context of the specification) in order to separate the film into two pieces, while Meilhon only needs one inherent tearing zone. But, of course, the ultimate objective of the two inventions is different; Meilhon separates a portion of packaged goods from the package while the present invention separates a defined width of the film forming part of the package, structure, i.e., the lid from the rest of the film forming the no longer needed wrapper or bag containing the ovenable food package.

3. Resolving the level of ordinary skill in the art.

¹² Page 5 lines 4-11, and Figure 4 at 7

¹³ Page 5 lines 10-11

¹⁴ Page 6 lines 31-32, page 28 at lines 28-29, and Figure 2 at 4

¹⁵ Page 6 line 32 to page 7 line 2, and Figure 4 (heavy lines below points 7)

Based on the disclosures one would expect the artisan to be aware of numerous polyester films useable for heat shrinking applications. One would also reasonable expect such artisan to know to place heat sealing coatings on such films. From the teachings of Meilhon an artisan would also know that there are films that exhibit preferential tearing characteristics which have been used to separate shrink wrapped products by tearing the shrink wrap film along the preferential tearing direction. The reasonable artisan would also conclude that the selection of films with a preferred tear direction inherent in the film itself indicate that tearing along a perforation zone such as shown in Meilhon, is unlikely.

4. Evaluating evidence of secondary considerations.

While no extraneous evidence of secondary considerations has been offered, the record itself tends to support that such film structure as claimed is unobvious, in view of the fact that shrink-wrapping and heat sealing of packages has been known at least since 1998 (Meilhon) and in 2000 Kendig does not claim a film incorporating Meilhon as the Examiner believes reasonable. It is worth noting that it took several more years in the highly competitive ovenable food packaging films industry to arrive at the present invention, which provides an advantageous cost reduction in food packaging materials.

For the above reasons, Appellants submit that independent claim 1 and all claims depending therefrom are patentable over the cited art.

Dependent Claim 22

With respect to claim 22, the Examiner's position is that the film taught by Meilhon contains multiple separating means each comprising one or two sets of perforations to provide easy access to the object contained within the film. However, in addition to the limitations of its parent claim 1, claim 22 adds the limitation that each of the separating means further comprises "*one or two sets of perforations extending along a dimension of the tube which is substantially parallel to its longitudinal dimension*". While Kendig shows multiple parallel perforations, the perforations are transversely to the tearing zone, and as best ascertained from the Kendig disclosure, across rather than along the longitudinal dimension of a hypothetical tube created using the Kendig or Meilhon films. Again it is noted that neither cited reference claims a tube structure, and that Kendig does not include a perforation zone along which the film tears, but a perforation zone which provides local rupture to create a starting point for eventual film tear along a direction perpendicular to the perforations. Since this claim element is not taught by the cited references, *prima facie*

obviousness has not been established and the rejection should be withdrawn.

Dependent Claim 23

With respect to claim 23, the Examiner's position is that the film taught by Meilhon contains multiple separating means each comprising one or two sets of perforations to provide easy access to the object contained within the film. However, in addition to the limitations of its parent claim 1, claim 23 further adds the limitation that the tube has two separating means. This is not an irrelevant structural limitation. The two spaced sets of parallel perforations as described in paragraphs 0016 and 0027 are used to separate the tube into two principal portions, a lid portion and a base portion. The lid portion remains on the container to seal it, while the "base" portion is removed prior to the cooking cycle. Neither Kendig nor Meilhon teaches or suggests such specific use of tearing zone forming perforations. Since this claim element is not taught by the cited references, *prima facie* obviousness has not been established and the rejection should be withdrawn.

Conclusion

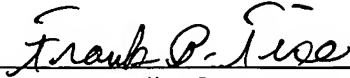
Because:

1. the *Graham* analysis shows substantial differences between the claimed subject matter and the prior art;
2. the claimed invention provides a shrinkable tube shaped film structure for enclosing a food container in a manner that permits subsequently separating portions of the tube to leave a lid on the container prior to cooking through a system of artificially created perforated zones, whereas the applied art provides a film wrapper that allows selective removal of sections of still fully wrapped objects using inherent weak zones of the film, and therefore solves a different problem in a different manner than the claimed invention;
4. the applied art lacks essential elements of the invention; and
5. there is nothing in the prior art pointing toward the present invention;

the record does not support a *prima facie* case of obviousness.

For the above reasons, Appellants respectfully request that the Examiner's decision finally rejecting all pending claims be reversed and all currently pending claims be allowed.

Respectfully submitted,



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Frank P. Tise, Reg. No. 50,379

Attorney and Agent for Appellants

March 31, 2008

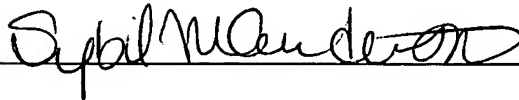
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VIII. CLAIMS APPENDIX

Listing of Claims:

1. An open-ended tube comprising walls of a heat-sealable multi-layer polymeric film, wherein said film comprises an outer shrinkable substrate layer and an inner heat-sealable layer, wherein said substrate layer has a degree of shrinkage in a longitudinal dimension of the tube of about 0% to about 50% when heated from ambient temperature to a temperature in the range of 55 to 100°C, and a degree of shrinkage in a transverse dimension of the tube of about 5 to about 70% when heated from ambient temperature to a temperature in the range of 55 to 100°C, wherein said multi-layer film comprises a plurality of separating means which enable one multi-layer portion of said film to be separated from an adjacent multi-layer portion of said film.
2. The tube according to claim 1 wherein the ratio of shrinkage at 100°C in the transverse dimension relative to that in the longitudinal dimension is in the range from 1:1 to 10:1.
3. The tube according to claim 1 wherein the ratio of shrinkage at 100°C in the transverse dimension to that in the longitudinal dimension is greater than 1:1.
4. The tube according to claim 1 wherein the substrate layer has a degree of shrinkage in the longitudinal dimension of the tube of about 0% to about 10% when heated from ambient temperature to a temperature in the range of 55 to 100°C, and a degree of shrinkage in the transverse dimension of the tube of about 5% to about 20% when heated from ambient temperature to a temperature in the range of 55 to 100°C.
5. The tube according to claim 1 wherein the substrate layer comprises polyester.

6. The tube according to claim 1 wherein the substrate layer comprises poly(ethylene terephthalate) or a copolyester in which the major repeat unit is ethylene terephthalate.
7. The tube according to any of claims 1 to 5 wherein the substrate layer comprises a copolyester of terephthalic acid (TPA) and isophthalic acid (IPA) with one or more diols selected from the group consisting of aliphatic and cycloaliphatic diols wherein the isophthalate polyester units and the terephthalate polyester units are present in relative amounts of from 1 to 40 mol % and from 99 to 60 mol %, respectively.
8. The tube according to claim 7 wherein said one or more diols is ethylene glycol.
9. The tube according to claim 7 wherein the substrate layer comprises a copolyester comprising substantially 18 mol % ethylene isophthalate and 82 mol % ethylene terephthalate.
10. The tube according to claim 1 wherein the substrate layer comprises two or three discrete layers.
15. The tube according to claim 1 wherein the heat-sealable layer comprises a copolyester of an aromatic dicarboxylic acid, an aliphatic dicarboxylic acid and a glycol.
16. The tube according to claim 15 wherein said copolyester of the heat-sealable layer comprises terephthalic acid, sebacic acid and butylene glycol.
17. The tube according to claim 16 wherein said copolyester is a copolyester of butylene glycol with about 50% terephthalic acid and about 50% sebacic acid.
18. The tube according to claim 1 wherein said film further comprises a printable or ink-receiving layer disposed on a surface of the substrate layer opposite to the heat-sealable layer.

19. The tube according to claim 18 wherein the printable or ink-receiving layer polymer is an acrylic and/or methacrylic polymeric resin.
20. The tube according to claim 18 wherein the printable or ink-receiving layer polymer comprises about 35 to 60 mole % ethyl acrylate, about 30 to 55 mole % methyl methacrylate and about 2 to 20 mole % methacrylamide.
21. The tube according to claim 1 wherein said heat-sealable multi-layer film is peelable.
22. The tube according to claim 1 wherein each of said separating means comprises one or two sets of perforations extending along a dimension of the tube which is substantially parallel to its longitudinal dimension.
23. The tube according to claim 1 wherein there are two separating means.
37. The tube according to claim 7 wherein the substrate layer comprises a first layer A and a second layer B, wherein layer B comprises the copolyester and layer A comprises a second copolyester of terephthalic acid with two or more aliphatic glycols, and wherein layer A is disposed in contact with the heat-sealable layer.
38. The tube according to claim 37 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.
39. The tube according to claim 38 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.
40. The tube according to claim 8 wherein the substrate layer comprises a first layer A and a second layer B, wherein layer B comprises the copolyester and layer A comprises a second copolyester of terephthalic acid with two or more aliphatic glycols, and wherein layer A is disposed in contact with the heat-sealable layer.

41. The tube according to claim 40 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.
42. The tube according to claim 41 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.
43. The tube according to claim 9 wherein the substrate layer comprises a first layer A and a second layer B, wherein layer B comprises the copolyester and layer A comprises a second copolyester of terephthalic acid with two or more aliphatic glycols, and wherein layer A is disposed in contact with the heat-sealable layer.
44. The tube according to claim 43 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.
45. The tube according to claim 44 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.
46. The tube according to claim 7 wherein the substrate layer comprises three layers in an ABA sequence, wherein layer B comprises the copolyester and layers A each comprise a second copolyester of terephthalic acid with two or more aliphatic glycols.
47. The tube according to claim 46 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.
48. The tube according to claim 47 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.

49. The tube according to claim 8 wherein the substrate layer comprises three layers in an ABA sequence, wherein layer B comprises the copolyester and layers A each comprise a second copolyester of terephthalic acid with two or more aliphatic glycols.

50. The tube according to claim 49 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.

51. The tube according to claim 50 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.

52. The tube according to claim 9 wherein the substrate layer comprises three layers in an ABA sequence, wherein layer B comprises the copolyester and layers A each comprise a second copolyester of terephthalic acid with two or more aliphatic glycols.

53. The tube according to claim 52 wherein the aliphatic glycols of the second copolyester are ethylene glycol and 1,4-cyclohexane dimethanol.

54. The tube according to claim 53 wherein the ethylene glycol and 1,4-cyclohexane dimethanol are incorporated in the second copolyester at about 65-70 mole % and about 30-35 mole %, respectively.

IX. EVIDENCE APPENDIX

Appellants do not rely upon evidence other than that recited in the foregoing sections of this appeal.

X. RELATED PROCEEDINGS APPENDIX

No proceedings other than this Appeal have transpired relating to the subject matter thereof, and no related decisions have been rendered by a court or the Board.